

REMARKS

Claims 1-3, 11-18, 21-25, 31-34, 37-38 and 47-72 are now in the case.

Applicants have amended claim 49 to correct a grammatical error.

Applicants have added claims 62-72 to claim additional subject matter.

These amendments are supported by the specification, claims and drawings as filed.

Rejections under 35 U.S.C. 103

Claims 1-3, 6, 11-14, 49-52, 56 have been rejected under 35 U.S.C. 103(a) as being unpatentable over by Greenway '461.

Applicants respectfully traverse the rejection in view of the following remarks.

The office action asserts that "[g]reenway differs from the claimed invention because it does not disclose the precise patterns claimed and does not disclose the average height differential. However, Greenway does teach that the pattern on the fabric will directly reflect the pattern on the forming surface. Therefore, it would have been obvious to one of ordinary skill in the art to have selected the appropriate patterns which would produce the desired characteristics such as softness, hand, etc in the final product."

Applicants respectfully disagree.

At the outset, Applicants submit that Greenway et al. disclose a process and related apparatus which obtains a higher degree of fiber entanglement with consequent improved fabric texture and tensile strength characteristics. (see for example Col 2, lines 9-13 and lines 20-22).

The solution offered by Greenway et al. to increase the tensile strength of the resulting fabric, is to hydroentangle a web in a two stage process.

During the first stage, an entangling member including a symmetrical pattern of void areas is associated to a fluid curtain to pre-entangle the web (see for example Col 2, lines 61-63 and Col 5, lines 12-43)

During the second stage, the pre-entangled web is advanced to a module 20 having a second entangling member 52 which can be formed from a plate fabricated of stainless steel in which the void areas comprise generally circular apertures defined by circumferential edges which, when associated with manifolds carrying jet nozzles, produces a fabric having increased tensile strength. (See for example Col 6, lines 60-68 and Col 6, lines 1-16)

Greenway et al. disclose that preferred entangling results are obtained by provision of baffle members including a radiused curvature which define apertures having a “frusto-conical” configuration. (See Col 3, lines 7-10, Col 6, lines 19-24 and Figs. 4C, 4D, 6A and 6B)

What is clear from Greenway et al., is that “[n]onwoven fabrics produced by the dual entangling process of the invention are characterized by close knit fiber interstitial binding which enhances the fabric tensile strength and aesthetic.” (See for example Col 7, lines 21-24 and Figs. 11A-12B comparing the tensile characteristics of fabrics obtained from identical webs subjected to different entangling members).

As best understood by applicants, Greenway et al. disclose that the best tensile strength results are obtained when a web is entangled on an entangling member having “frusto-conical” apertures in comparison to an entangling member having apertures with square edges or an entangling member formed of a woven screen (see for example Table VI, Table VII, and Col 9, lines 39-42 and 55-56, Col 10, lines 1-2).

Greenway et al explain that “[v]ector forces in the frusto-conical member are uniformly directed into void areas of the member upon impact with radiused surface of baffle members. Downward and inward direction of the fluid vectors obtains efficient energy transfer to the web of the fluid forces. It will be seen that in the conventional squared edge member, fluid forces are, in part, directed across the web surface with consequent dissipation of fluid energy.” (Emphasis supplied, see Col 7, lines 7-15)

As best understood by applicants, it appears that the solution offered by Greenway et al. to the problem of increasing the tensile strength of a fabric is to modify the edges portion of the apertures of the entangling member that are adjacent to the web during entanglement by rounding and increasing the radius of the apertures’ edges.

Greenway et al. further explain that “[a]dvantage is obtained in the invention by the provision of novel frusto-conical entangling member 52 which directs fluid forces into a discrete and focused pattern to effect web entanglement”, and that “[t]wo stage entanglement in accordance with the invention employing a frusto-conical or radiused entry entangling member obtains further advantage in fabric aesthetics and tensile strength characteristics” (see Col 11, lines 64-68 and Col 13, lines 1-5).

Applicants submit that Greenway et al. do not explicitly discuss the three-dimensionality nature or characteristics of the resulting fabric nor its ability to remove and trap particulate soils from a surface to be cleaned.

Applicants remind the Examiner that it is basic patent law that “[t]o establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation ... to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant’s disclosure.” (Emphasis supplied) *In re Vaeck*, 947 F.2d 488, USPQ 2d 1438 (Fed Cir. 1991).

Contrary to the office action’s assertion, it is applicants’ position that the ‘461 reference does not suggest the desirability to modify the entangling member of Greenway et al. in order to provide a cleaning sheet with channels having a width of between about 1 mm to about 8 mm and/or a cleaning sheet with a working face having an Average Height Differential of at least about 1 mm.

The office action asserts that one of ordinary skill in the art would have been motivated to modify Greenway et al. by selecting the appropriate pattern which would “produce the desired characteristics such as softness, hand, etc in the final product”.

Applicants submit that modifying Greenway et al. in order to impact, one way or another, the softness or hand-feel of the resulting fabric has nothing to do whatsoever with providing a cleaning sheet for cleaning a surface having particulate soils. As a result, it is applicants’ position that one of ordinary skill in the art would have had no motivation to

modify the process disclosed by Greenway et al. to produce a cleaning sheet having the claimed characteristics.

As previously discussed, Greenway et al.'s solution to the problem of making a fabric with increased tensile strength, is to hydroentangle a web in a two stage process, one of this stages employing an entangling member with frusto-conical apertures or radiused entry which enhance energy efficiencies in the entangling process.

Applicants submit that Greenway et al. do not provide any motivation to modify their process and/or apparatus in a way which would produce a cleaning sheet as claimed.

In addition, applicants note that although Greenway et al. affirm that the resulting fabric has textile-like aesthetic, they do not teach or even suggest any correlation between softness, hand-feel or even aesthetic and the Average Height Differential and/or width of the channels of the resulting fabric.

With this in mind, it is submitted that one of ordinary skill in the art in possession of the Greenway et al. reference at the time of the invention would not have recognized the need to provide a cleaning sheet having the claimed three-dimensional characteristics, and would have had no motivation to modify the Greenway et al. process and apparatus to produce a cleaning sheet as claimed.

It is also Applicants' position that one of ordinary skill in the art attempting to improve the Greeway et al. process or apparatus via experimentations or modifications, would have had no reasonable expectation of success to produce a cleaning sheet having a non-random three-dimensional pattern with channels having a width of between about 1 mm to about 8 mm and/or a cleaning sheet with a working face having an Average Height Differential of at least about 1 mm.

Applicants note that the modification suggested by Greenway et al. is to round the edges of the apertures of the forming surface by increasing their curvature angle. Applicants submit that rounding the edges of the apertures, would not result in a cleaning sheet having the claimed channel width and/or Average Height Differential.

Moreover, it is well settled patent law that "[t]he determination of what constitutes undue experimentation in a given case requires the application of a standard of reasonableness,

having due regard for the nature of the invention and the state of the art. The test is not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed." (Emphasis added, *In re Wands*, 858 F.2d 731, 8 U.S.P.Q.2d 1400 (Fed. Cir. 1998))

In addition, "[a]n obvious-to-experiment standard is not an acceptable alternative for obviousness. Selective hindsight is no more applicable to the design of experiments than it is to the combination of prior-art teachings. There must be a reason or suggestion in the art for selecting the procedure used, other than the knowledge learned from applicant's disclosure." *In re Dow Chemical Co.*, 837 F.2d 469, 5 U.S.P.Q.2d 1529 (Fed. Cir. 1988)

Applicants submit that since Greenway et al. do not provide any specific direction or guidance as to what modification would result in a fabric usable as a cleaning sheet having the claimed characteristics, it is Applicants' position that one of ordinary skill in the art in possession of Greenway et al. would have to engage in undue experimentation to create a cleaning sheet as presently claimed.

Applicants submit that the office action does not state where in the Greenway, et al. reference it is suggested that the disclosed process and apparatus could be modified to produce a cleaning sheet as presently claimed. With regard to the rejection of record at paragraph 3 of the office action dated 6/22/2004, the office action does not provide any secondary reference to combine with the Greenway, et al. reference in support of the position that the process and/or apparatus could be modified to produce the claimed cleaning sheet. Applicants respectfully remind the Examiner that Applicants' disclosure should not be used as a blueprint to reconstruct the claimed invention out of isolated teachings in the prior art. *Grain Processing Corp. v. American Maize-Products*, 840 F.2d 902, 907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988).

Applicants note that "[t]o establish a prima facie case of obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

Applicants submit that Greenway et al. do not teach nor even remotely suggest neither the width of the channels nor the average height differential of the fabric obtained with the

apparatus and process disclosed. Applicants submit that the only mention of a height or a width by Greenway et al. is with regard to the entangling member.

Greenway et al. disclose that “the apertures (of the entangling member) may have a diameter of 1/16 inch and a center to center spacing of 3/32 inch. A preferred screen has a thickness of 0.03 inch.” (see Col 6, lines 34-39)

Assuming, *arguendo*, that the resulting fabric would conform to the exact dimensions of the apertures of the entangling member, Applicants submit that the hypothetical average height differential of the resulting sheet would be of 0.762 mm (i.e. 0.03 inch = 0.762 mm).

Consequently, it is applicants’ position that the office action fails to indicate where in the Greenway et al. reference, any teaching, motivation or suggestion can be found to modify the process and/or apparatus in order to produce a cleaning sheet as claimed.

In light of the foregoing analysis, it is Applicants’ overall position that the rejections of claims 1-3, 6, 11-14, 49-52, 56 over the Greenway et al. reference constitutes an impermissible hindsight reconstruction of the present invention. In that regard, attention is directed to *In re Dembiczak*, 175 F. 3d 994, 50 USPQ 2d 1614 (Fed. Cir. 1999). In that case, the Federal Circuit emphasized the principle that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is the rigorous application of the requirement for a showing of the teaching or motivation to combine or otherwise modify prior art references.

Furthermore, as stated in *In re Shuman* 361 F. 2d 1008, 1012, 150 USPQ 54, 57 (CCPA, 1966);

It is impermissible to first ascertain factually what appellants *did* and then view the prior art in such a manner as to select from the random facts of that art only those which may be modified and then utilized to reconstruct appellant’s invention from such prior art.

As also noted in *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F. 2d 1572, 1577 & n. 14, 221 USPQ 929, 933 & n. 14 (F. Cir. 1984), when [as in the instant case] prior art references require selective combination by the court to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gleaned from the invention itself. [Cited in *Interconnect Planning Corp. v. Feil*, 227 USPQ 543, 551 (CAFC, 1985)]

In view of the foregoing, reconsideration and withdrawal of the rejection of claims 1-3, 6, 11-14, 49-52, 56 as being unpatentable over Greenway et al. are requested.

Claims 1-3, 6, 11-14, 49-52, 56 have also been rejected under 35 U.S.C. 103(a) as being unpatentable over Greenway '461 in view of WO 99/07273.

Applicants note that the '273 reference published on February 18, 1999.

Since the priority date of the present application is December 10, 1999, the '273 would in theory qualify as 102(a) prior art.

However, applicants submit that in a declaration under 37 C.F.R. 1.132 which accompany this response, Mr. Saeed Fereshtehkhou declares that he "conceived the wipe article having a three-dimensional wiping surface which can be characterized by its Average Height Differential, Average Peak to Peak Distance and Surface Topography Index and having an Average Height Differential of at least about 0.5 mm as disclosed in the PCT application publication No. WO 99/07273."

As a result, because the subject matter used in the office action for the rejection was not by another, applicants submit that the '273 reference is removed as prior art therefore overcoming the rejection.

Reconsideration and withdrawal of the rejection of claims 1-3, 6, 11-14, 49-52, 56 under 35 U.S.C. 103(a) as being unpatentable over Greenway '461 in view of WO 99/07273 are therefore respectfully requested.

Claims 15-18, 21-25, 31-34, 37-38, 47-48, 53-55 and 57-61 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Greenway et al. in view of the Shizuno et al., Floyd et al., Lin.

The office action includes an alternative rejection of the same claims further in view of the '273 reference.

For the sake of brevity, Applicants submit that since claims 15-18, 21-25, 31-34, 37-38, 47-48, 53-55 and 57-61 depend either directly or indirectly from independent claims 1 and 49, the arguments previously presented with regard to the Greenway et al. reference also apply and that the '273 reference has been removed as prior art therefore overcoming the rejections.

Reconsideration and withdrawal of the rejection are therefore respectfully requested.

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It is submitted that all the claims are in condition for allowance. Early and favorable action on all claims is therefore requested.

If the next action is other than to allow the claims, the favor of a telephonic interview is requested with the undersigned representative.

Respectfully submitted,

Wong et al.

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